**Problem analysis**

**Problem specification**

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| **Client:** | * The coordinator of the Department of Transformation and Improvement from Universidad Icesi. |
| **Users:** | * Employees from the department of Transformation and Improvement in Universidad Icesi. * Representants of every other department inside Universidad Icesi. |
| **Functional requirements:** | * Req#1: Register a collaborator from Universidad Icesi * Req#2: Register a department from Universidad Icesi. * Req#3: Register a project request. * Req#4: Change the status of a request. * Req#5: Create a Knowledge Management project. * Req#6: Create a Transformation/Improvement project. * Req#7: Close a project. * Req#8: Display the information of the projects in matrix form. * Req#9: Access the detailed information of a project. * Req#10: Review the efficiency of a collaborator from the Department of Transformation and Improvement * Req#11: Review the efficiency of a determined project. * Req#12: Review the efficiency of a request. * Req#13: Consult the number of projects by type and priority. * Req#14: Consult the number of projects led by every collaborator in the Department of Transformation and Improvement. * Req#15: Consult the number of received requests and managed in a given month. * Req#16: Generate test objects. |
| **Context of the problem:** | * Universidad Icesi has an appointed Department of Transformation and Improvement which focuses on receiving requests for institutional projects or creating new projects, advising, managing all the appropriate information so the university can improve in an orderly and standardized fashion. Currently the Department faces a problem regarding its organization and management of requests and projects, so it looks for a program that relieves this stress. * The coordinator of the Department of Transformation and Improvement wants his employees (and the rest of collaborators in the university) to utilize the program to manage all the information regarding requests, projects, and statistics. A collaborator should be able do register a request and a worker from the Department should be able to change the status request, make a project, close the project, and some other functionalities. The program should also allow the users to check efficiency indicators regarding requests, projects or collaborators enrolled inside the Department of Transformation and Improvement. * The program should work with a simple menu that multiple users can easily understand and utilize properly. It must be able to handle a big amount of information but maintain a high level of organization and coherence. |
| **Nonfunctional requirements:** | * Interoperability: The program should be able to handle multiple users at a time. * High usability: The program should use a menu that makes it easy to understand while entering, editing, or consulting information. * High availability: The program should be working 24/7 and outage risks mitigated. |

**Requirement specifications**

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| **Summary:** |  | | |
| **Inputs** | **Input name** | **Data Type** | **Conditions for valid values** |
|  |  | * Mandatory |
| **Results or postcondition** |  | | |
| **Outputs** | **Output Name** | **Data type** | **Format** |
| Success | String | A message stating that the community was registered successfully will be printed. |
| Error | String | A message stating there was an error of unknown cause that didn't allow the community to be registered will be printed. |
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